

G2 Series/ 1A/1B

Solid State Relays



Model Number

Parameters

Input Characteristics

LED Forward Current - Turn on

LED Forward Current - Turn off

Recommended Forward Current

LED Forward Voltage

Maximum Input Ratings

LED Forward Current

LED Reverse Voltage Withstand

Output Characteristics

Switching Voltage

Switching Current

Current Limit: N.O. Channel Only

On Resistance

Off State Resistance: N.O. Channel

Off State Resistance: N.C. Channel

Off State Leakage: N.O. Channel

Off State Leakage: N.C. Channel

Turn On Time

Turn Off Time

Thermal Offset Voltage

General Characteristics

Dielectric Strength - Input to Output

Capacitance - Input to Output

Power Dissipation

Model Number	Sym.	Test Conditions	Units		G2-AB01 1A/1B	G2-AB02 1A/1B
LED Forward Current - Turn on	I_{Fon}	$I_L = 100mA, t = 10ms$	mADC	Max Typ	5.0 2.0	5.0 2.0
LED Forward Current - Turn off	I_{Foff}	$I_L = 0.2mA, V_L = (Note 1)$	mADC	Min Typ	0.1 1.8	0.1 1.8
Recommended Forward Current	I_F		mADC	Min Max	10 30	10 30
LED Forward Voltage	V_F	$I_F = 20mA$	VDC	Min Max	1.1 1.4	1.1 1.4
LED Forward Current	I_F		mADC	Max	50	50
LED Reverse Voltage Withstand	V_R	$I_R = 10mA$	VDC	Max	10	10
Switching Voltage	V_L	$I_L = 50mA$	V PEAK	Max	400	250
Switching Current	I_L	Each Channel Both Ch.'s Simultaneously	mA	Max Max	150 110	200 150
Current Limit: N.O. Channel Only	I_{Lmt}	$I_F = 5mA, t = 5ms$	mA	Typ	380	380
On Resistance	R_{on}	$I_F = 5mA/0mA, I_L = 50mA$	W	Max	24	13
Off State Resistance: N.O. Channel	R_{off}	$I_F = 0mA, V_L = 100V$	GW	Min Typ	0.5 5000	0.5 5000
Off State Resistance: N.C. Channel	R_{off}	$I_F = 5mA, V_L = 100V$	GW	Min Typ	0.5 5000	0.5 5000
Off State Leakage: N.O. Channel	I_{off}	$I_F = 0mA, V_L = 100V$	nA	Max	200	200
	I_{off}	$I_F = 0mA, V_L = Max$	mA	Typ Max	0.17 1	0.17 1
Off State Leakage: N.C. Channel	I_{off}	$I_F = 5mA, V_L = 100V$	mA	Max	0.02	0.02
	I_{off}	$I_F = 5mA, V_L = Max$	mA	Typ Max	1 1	1 1
Turn On Time	T_{on}	$I_F = 5mA, I_L = 50mA$	ms	Max	5.0	5.0
Turn Off Time	T_{off}	$I_F = 5mA, I_L = 50mA$	ms	Max	1.0	1.0
Thermal Offset Voltage		$I_F = 5mA$	mV	Typ	0.2	0.2
Dielectric Strength - Input to Output		$t = 60sec$	VRMS	Min	3750	3750
Capacitance - Input to Output			pF	Typ	1.2	1.2
Power Dissipation	P_{Diss}		mW	Max	600	600

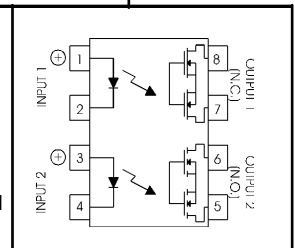
Notes:

1: V_L for LED Forward Current - Turn Off is 50 Volts less than "Switching Voltage Max".

2: Specifications subject to change without notice.

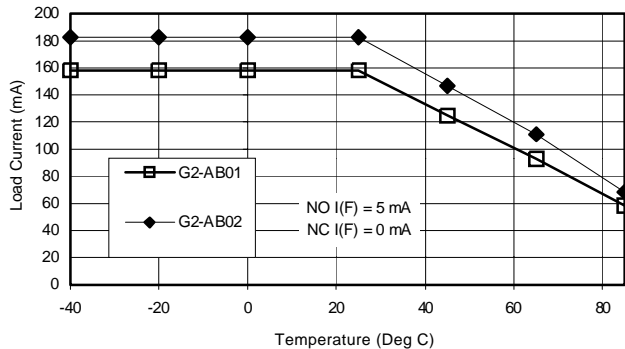
* $I_F = 10mA$

Schematic Top View:
Mold mark on top of relay indicates Pin #1
Package Drawings on Page 3

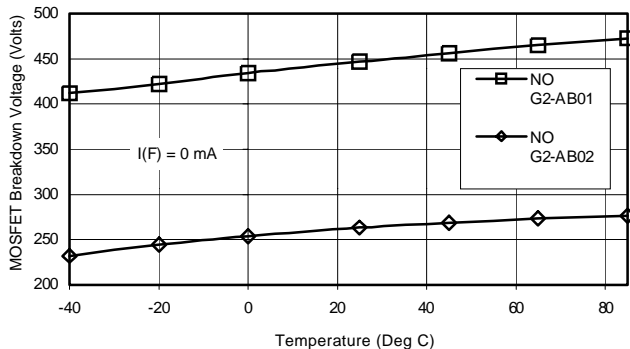


G2 Series/ 1A/1B

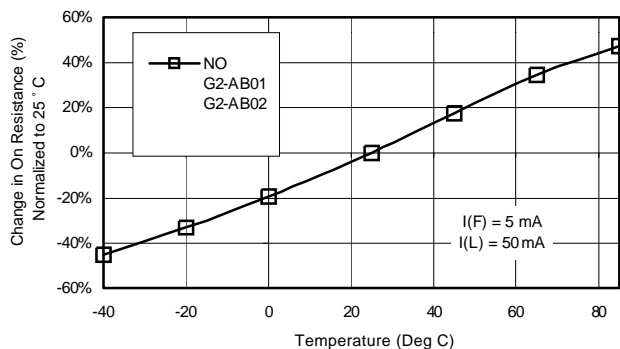
*See page 3 for characteristic curves of normally closed switches



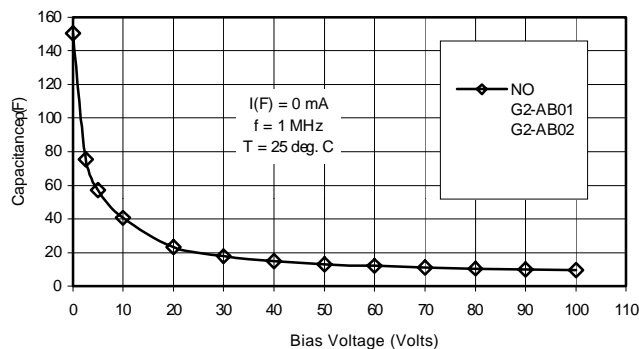
A. Load Current vs. Ambient Temperature



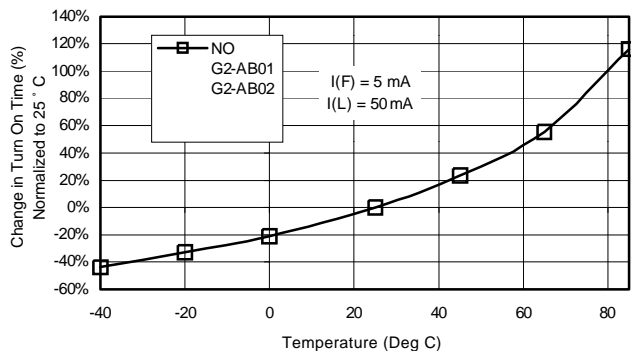
B. Output MOSFET vs. Ambient Temperature



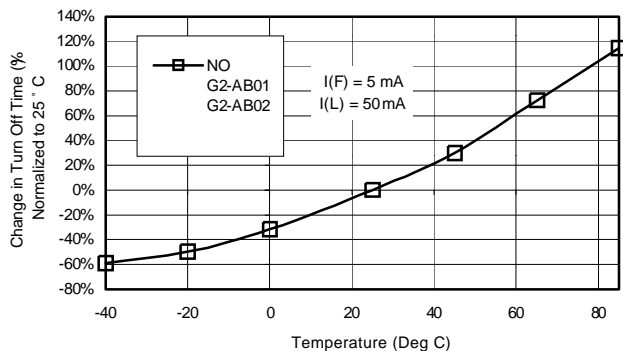
C. On-Resistance vs. Ambient Temperature



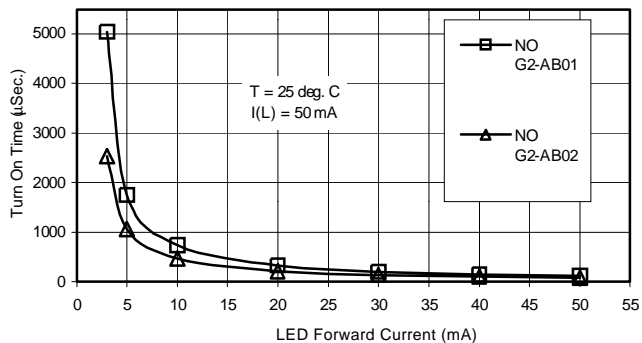
D. Output Capacitance vs. Applied Voltage



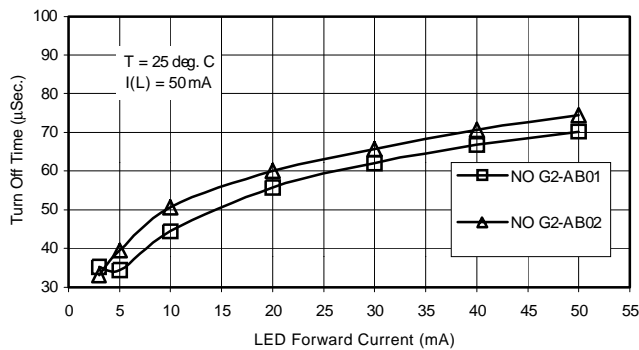
E. On Time vs. Ambient Temperature



F. Turn Off Time vs. Ambient Temperature

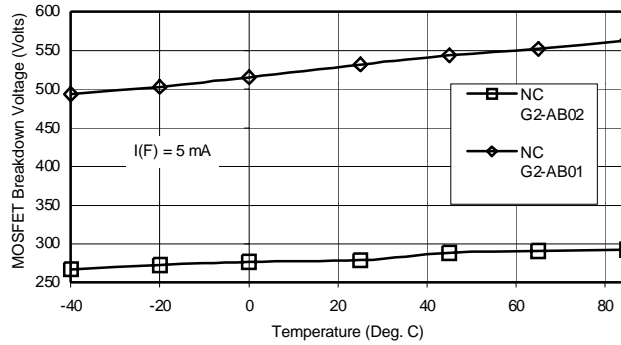


G. Turn On Time vs. LED Forward Current

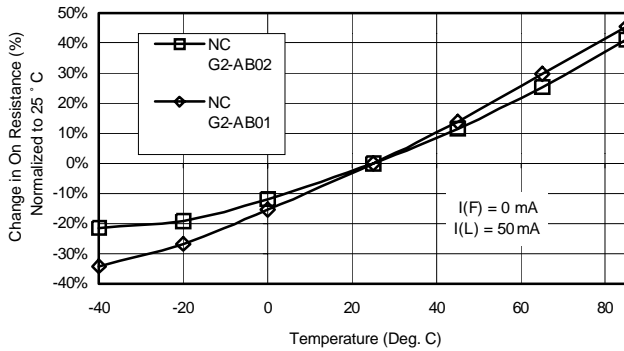


H. Turn Off Time vs. LED Forward Current

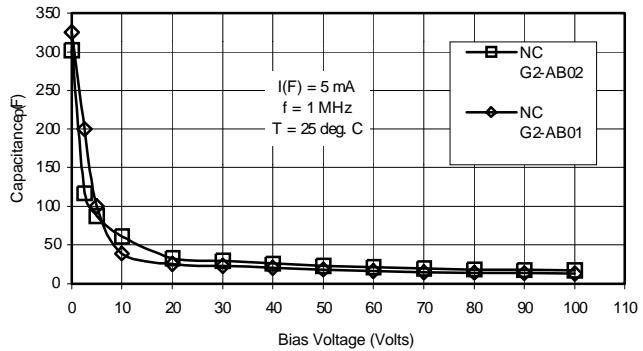
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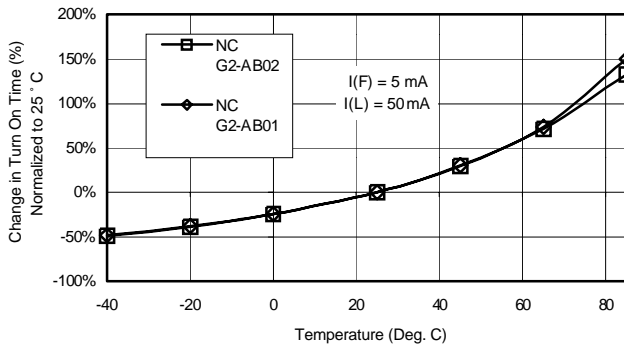
I. Output MOSFET BV vs. Ambient Temperature



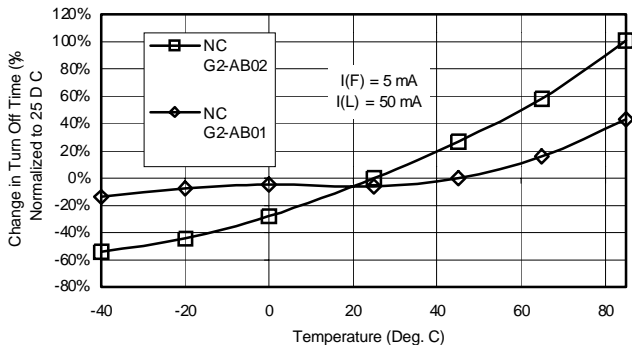
J. On-Resistance vs. Ambient Temperature



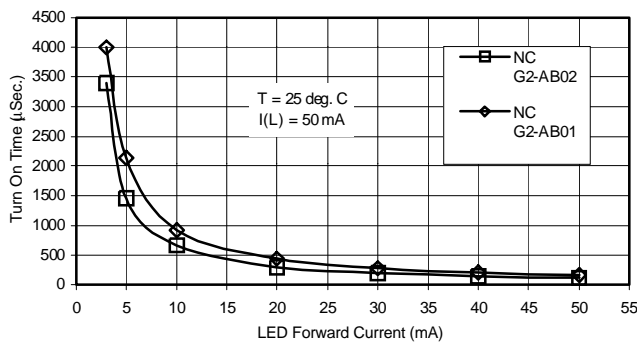
K. Output Capacitance vs. Applied Voltage



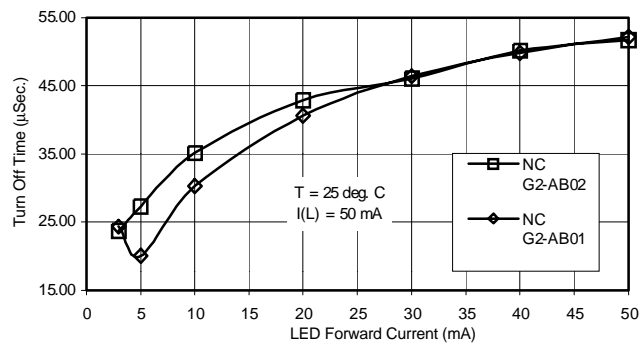
L. On Time vs. Ambient Temperature



M. Turn Off Time vs. Ambient Temperature



N. Turn On Time vs. LED Forward Current



O. Turn Off Time vs. LED Forward Current